

Title (en)

Planetary gearing with torque limiter and its use in hand tools

Title (de)

Umlaufgetriebe mit Drehmomentbegrenzer und dessen Verwendung in Handwerkzeugen

Title (fr)

Transmission à trains épicycloïdaux équipée d'un limiteur de couple et son application dans des outils à main

Publication

EP 0635658 B1 19990113 (DE)

Application

EP 94110238 A 19940701

Priority

DE 4324876 A 19930723

Abstract (en)

[origin: EP0635658A2] For adaptation to different loads, the gearing, which is preferably provided for use in battery-operated electric drills or electric screwdrivers, has an overload clutch for torque limitation. The overload clutch consists essentially of an internal gear (3) which is arranged around a planetary gearing, is formed from plastic and is provided with internal toothing which is in engagement with the planetary gearing. A spring device (18) presses on the internal gear in order to press it axially against a stop wall (12), with the result that the hollow gear is held fixed against rotation by frictional engagement until a predetermined torque loading is reached, the internal gear being free to rotate when the predetermined torque loading is exceeded. For this purpose, a metallic cam disc (5) is arranged between the plastic internal gear and the spring device, this cam disc being connected in a fixed manner in terms of rotation to the internal gear. <IMAGE>

IPC 1-7

F16H 35/10; **B25B 21/00**; **B25F 5/00**; **B25B 23/14**

IPC 8 full level

B25B 21/00 (2006.01); **B25B 23/14** (2006.01); **B25F 5/00** (2006.01); **F16D 7/04** (2006.01); **F16H 1/46** (2006.01); **F16H 35/10** (2006.01)

CPC (source: EP US)

B25B 21/00 (2013.01 - EP US); **B25B 23/141** (2013.01 - EP US); **F16D 7/044** (2013.01 - EP US); **F16H 1/46** (2013.01 - EP US); **F16H 35/10** (2013.01 - EP US)

Cited by

CN103939587A; DE19729988C1; EP2228157A1; CN102852998A; WO2009059421A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

DE 9320533 U1 19940922; DE 4324876 A1 19950202; DE 4324876 C2 19950601; DE 4433584 A1 19960328; DE 4433584 C2 19980827; DE 59407629 D1 19990225; EP 0635658 A2 19950125; EP 0635658 A3 19950329; EP 0635658 B1 19990113; US 5551927 A 19960903

DOCDB simple family (application)

DE 9320533 U 19930723; DE 4324876 A 19930723; DE 4433584 A 19940921; DE 59407629 T 19940701; EP 94110238 A 19940701; US 28023794 A 19940725